

## REMARKS

As a preliminary matter, Applicant respectfully traverses the outstanding Advisory Action as being nonresponsive. The Examiner has a burden to first answer all of Applicant's meritorious arguments before maintaining, and therefore repeating, a previous rejection. In the present case, however, this burden has not been met. The Advisory Action resolves none of the clear errors that appeared in the previous Office Action (Paper No. 20060711), and even repeats them. Both of these papers from the Patent Office must therefore be corrected, and resubmitted.

For example, Applicant pointed out to the Examiner that the previous Office Action asserts both that the Watanabe reference "was not relied upon," but also that Watanabe was the basis for a substantive rejection under Section 102 – a clear contradiction. Given the number of errors that appear in the Office Action, Applicant is unable to determine with confidence whether the Examiner's error was stating that he did not rely upon Watanabe, or whether he meant to cite a different reference as the basis for the anticipation rejection. In response, the Examiner has refused to correct the Office Action "because it is clearly stated ... how the claims were rejected." As discussed above, the grounds for rejecting the claims was hardly clear, especially given that the Examiner had rejected claims that had long since been cancelled.

Just because the Examiner's intention was clear to the Examiner, it was by no means clear to Applicant, or any other objective reader. The Examiner even compounds this confusion in the Advisory Action by conflictingly stating that, in the previous Office Action,

the same Watanabe reference “was clearly and specifically relied upon,” but also “was inadvertently cited again.” Exactly what does the Examiner mean by these contradictory statements? Was Watanabe relied upon? Or was the reference inadvertently cited? Did the Examiner mean to rely upon a different reference, and inadvertently cite the reference as “Watanabe?” Again, the Office Action must be resubmitted to correct these clear errors.

Nevertheless, in order to expedite prosecution only, Applicant has amended independent claims 1 and 6-7 herein in an attempt to address some of the Examiner’s points that do not appear to be contradicted within the two Actions. Specifically, the claims now alternatively recite the limitations at issue as at least third order. The Examiner should see that there is no substantive difference between the present wording in the claims and the previous wording. Nevertheless, the present wording renders the Examiner’s outstanding Section 112 enablement rejection fully overcome.

Furthermore, with respect to the outstanding Section 112 rejection, Applicant again submits that a *prima facie* case for the rejection still has not been established. The Examiner merely states that “undue experimentation” must be performed by one of ordinary skill in the art because the Examiner cannot find a specific formula in the present Specification that contains fourth order or higher terms within the particular formula. The Examiner still, however, does not say what kind of undue experimentation would have to be performed, despite the fact that Applicant timely traversed this assertion. The only basis for the rejection on record therefore, is the Examiner’s assertion that there is no working example of a particular mathematical formula in the present Specification. Even if this

assertion were correct (which Applicant does not concede), it may not be the sole basis for a nonenablement rejection.

Section 2146.01 of the MPEP defines one test for enablement as whether the experimentation needed to practice the invention is undue or unreasonable. Although Section 2146.01(a) lists the “existence of working examples” as one of several factors to determine whether undue experimentation is required, Section 2146.02 expressly states that “the absence of a working example will not by itself render the invention nonenabled.” In the present case, the Examiner has never asserted any more than the lack of a mathematical formula (i.e., “working example”) that shows fourth order and/or higher terms. According to Section 2146.02 therefore, nonenablement has not been established in this case.

Such is even more true when the “working example” the Examiner seeks is a mathematical formula. By definition, an equation containing higher order terms is more complex, and thus more narrow, than an equation containing only lower order terms. Therefore, one of ordinary skill in the art is well apprised that a function of the lowest order required for patentability will necessarily encompass higher order functions within its scope. It is impossible to describe every single example of a mathematical equation that would fall within the scope of the present claims, because the possibilities are practically infinite. The Examiner’s demand that every possible order of function must be represented by at least one corresponding equation is therefore unreasonable. The present Specification clearly enables one of ordinary skill in the art to make and use the present invention for third order functions with respect to time, as well as higher order functions for the same concept.

It must also be pointed out that the outstanding enablement rejection appears to confuse a showing of an *equation* containing a fourth order or higher variable, with a description in the Specification of a fourth order or higher function. A conceptual mathematical function can be sufficiently described to enable one of ordinary skill in the art to make and use the invention without having to necessarily show a specific mathematical equation for every such possible function. The MPEP does not require that every possible mathematical algorithm be listed in the disclosure. It is only required that the Specification disclose enough information (and algorithms) to sufficiently convey the basic concept of the present invention to one of ordinary skill in the art. Because the record does not assert how one of ordinary skill in this field of art would not grasp the scope of the present claims, when read in light of the present Specification, the repetition of the Section 112 rejection is thus further inappropriate, and should be withdrawn.

The Examiner's refusal to withdraw the outstanding Section 102 rejection is also based on clear error. In the Advisory Action, the Examiner admits that the prior art only "specifies adjusting *with the cubic function* (third order function) the state of focusing system (sic) due to change of lapse of TIME." (Italicized emphasis added, underlined emphasis in original). A third order function that *changes over time* is not automatically the same thing as a function that is third order with respect to time. In the present case, the cited prior art function is clearly not cubic with respect to time. The only cubic function shown in the "JP 04-028020" reference (see Figs. 2, 4) is with respect to the variable "x," which clearly represents *position*, and not time. The rejection is therefore again clearly based on error.

Moreover, the Examiner's further assertion that the cited cubic function is in any way related to time is also clearly erroneous. JP 04-028020 shows the cubic function in question to be " $y = ax^3 + bx^2 + cx + d$ ." Time (conventionally represented only by the designation "t") simply does not appear anywhere in the equation. The Examiner's assertion to the contrary is simply without any support from the prior art, and the repeated Section 102 rejection should be withdrawn for at least these additional reasons.

The repeated Section 103 obviousness rejection, however, should be withdrawn both because the Examiner has not even responded to Applicant's argument that the cited Tanaka reference (JP 11-306551) to Applicant's argument that the reference fails to affirmatively teach or suggest a function of third order with respect to time. Furthermore, and according to the Examiner's own statements in the Advisory Action, impermissible hindsight has clearly been demonstrated in this case. For either reason, the rejection should have been withdrawn, and the refusal to do so was inappropriate.

As previously discussed, and not challenged on the record by the Examiner, Tanaka simply makes no mention, explicitly or implicitly, of a third order function with respect to time, as clearly featured in all of the present pending claims. Section 2143.03 of the MPEP requires that the cited art affirmatively teach or suggest each and every limitation of the claims, or an obviousness rejection cannot be established. In the present case, the Examiner admits that cited features from Tanaka are not taught or suggested by Tanaka to be equivalent to the third-order function recited in the present invention. Instead, the Examiner relies again upon *Applicant's own disclosure* to support the alleged equivalence.

The Examiner simply may not so rely upon Applicant's own disclosure without affirmatively citing it as one of the prior art references that forms the grounds for rejection. The Examiner clearly could not do so in the present case though, because the portion of the present disclosure the Examiner relies upon is not included in the "Background Art" section, and is therefore not admitted prior art. The Examiner has cited only the Tanaka reference as the basis for the repeated obviousness rejection, and Tanaka by itself clearly does not teach or suggest each and every feature of the *claimed* invention. The rejection is still deficient on its face for at least these reasons.

The Examiner's repeated reliance on only Applicant's disclosure to support the alleged equivalence between Tanaka and the present claims is again another clear demonstration of impermissible hindsight. The Examiner expressly acknowledges that some basic level of hindsight is proper if "it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, *and does not include knowledge gleaned only from the applicant's disclosure.*" (Page 5 of the Advisory Action, emphasis added). Yet, on page 6 of the Advisory Action, the Examiner still relies only on Applicant's disclosure to support the assertion of equivalence between Tanaka and the present claims. Not one teaching or suggestion has ever been cited from Tanaka to support the Examiner's assertion in this regard, and therefore the rejection is still further deficient for at least these reasons as well.

Additionally, the Examiner's reliance upon Applicant's disclosure represents a clear misreading of the present Specification. The portion of the Specification quoted by the

Examiner is clearly describing different *embodiments* of the present invention. Nothing in the cited text supports the Examiner’s much broader proposition that different embodiments described in the Specification are *automatically* equivalents to one another in the art, or obvious modifications of one another, as the Examiner incorrectly asserts. It is not uncommon in patent practice, for example, for one Application to describe several embodiments of a particular invention that are fully patentable, and several others that may read upon the prior art. In the present case, the Examiner has cited nothing from the present disclosure other than the fact that present invention has several embodiments.

Moreover, the Examiner does not even appear to have given proper consideration to the several embodiments described in the cited text portion. The Examiner asserts that the present Specification describes that *any* trigonometric function, and therefore that in Tanaka, is “an art-recognized equivalent” of the third-order time function of the present claims. No portion of the cited text, however, supports this overly broad assertion. With respect to fourth-order or higher functions described in the cited portion, the Specification expressly states that “a combination [of] trigonometric functions may be used as the function.” The text simply does not say that any single trigonometric function, such as what the Examiner cites from Tanaka, will serve as a third order function with respect to time. In fact, the rest of the cited text implies the opposite.

As emphasized by the Examiner himself, the cited text from Applicant’s own disclosure only states that “any [continuous] function may be used as far as the second order differential.” (Emphasis added). As the Examiner can clearly see though, the present claims

were already amended in Amendment A (filed May 3, 2006) to narrow the scope of the claims to only the third order, or higher. Thus, even if the Examiner were correct about the alleged equivalence between Tanaka and the present invention (which Applicant does not concede), the alleged equivalence could only apply to *second order functions or lower*, and not the third order functions clearly recited in the pending claims. Accordingly, the repeated Section 103 rejection is based on yet another clear error, and should be withdrawn for at least these reasons as well.

For all of the foregoing reasons, Applicant submits that this Application, including claims 1 and 6-7, is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,  
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